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Navy Technical Information Presentation System



What was NTIPS?

The Navy Technical Information Presentation System (NTIPS) Program was a comprehensive RDT&E program established to improve the Navy's ability to acquire, deliver, and support Technical Information provided to the Fleet personnel responsible for maintaining and operating the Navy's complex shipboard and shore-based equipments and weapon systems.

What did the NTIPS Program accomplish?

NTIPS applied the advances made in electronics and information-system management during the 1980's to the automation of weapon-support Technical Information. The primary and longest range contribution was the design and demonstration of the capability and utility of Interactive Electronically displayed Technical Manuals now widely known as IETMs (Interactive Electronic Technical Manuals).

What are the payoffs of IETMs?

NTIPS field tests demonstrated quantitatively that the use of IETMs improves maintenance performance (reduces mistakes 35%), cuts down erroneous parts-removals (50%), reduces maintenance time (25%), reduces system-maintenance training time (25%), reduces user problems, and is preferred by 90% of the technicians.

The need for NTIPS resulted from the many problems with Technical Manuals in the Fleet.

In the 1970's the Navy was confronted with many Technical Manual (TM) problems. TMs suffered from inaccuracies; they were difficult to update and maintain in the field; and mismatches occurred between the way the manuals were written and presented and the relatively low reading-levels of the maintenance technicians. Microfilm and microfiche technologies were unable to improve the overall TM situation.

The Navy established a comprehensive RDT&E program to attack the TM problems.

NTIPS was created in the 1970's by the Chief of Naval Operations and the Chief of Naval Material as a centrally managed multi-phased RDT&E program with the resources to analyze, test, and propose solutions to key problems with paper TMs.

A "Cradle to the Grave" approach was taken.

NTIPS proposed improvements over the entire life-cycle of TMs in the Navy from the Definition-Acquisition stage, through Generation, Mastering, Replication, Distribution, and Control functions, to the final Delivery and Display to the End-User. The initial research was based on a Fleet user survey using 22 Navy activities and more than 400 technicians. Technical analyses were performed in the areas of human factors, information systems, and logistics. An initial total system approach was taken, feasibility studies undertaken, and a comprehensive concept developed. Of particular importance was the application of the emerging technology in the Computer Hardware, Information Processing, Data Base, and Electronic Display fields.

NTIPS developed and tested a prototype.

As a result of the NTIPS exploratory research, several prototype capabilities were subsequently developed and field tested which automated the authoring process and the electronic display of the TM. The interactive display of this information was integrated with automated troubleshooting techniques. These tests not only demonstrated the benefits of electronic TMs but also showed the high level of user acceptance. Full scale tests of the NTIPS developed processes and technology were undertaken on two weapon systems: the rudder-trim system of a F-14A aircraft and the AN/SPA 25D radar repeater. The tests were performed using the actual Fleet technicians who would utilize them in a real situation.

What were the results of the NTIPS field tests?

The NTIPS Program not only developed the IETM concept now being widely implemented in the Army, Air Force, and the Navy, but it also performed requirements analyses, technical evaluations, and finally a series of field tests which established the effectiveness of IETMs for operational weapon systems maintained by Fleet technicians under realistic conditions. These tests demonstrated measurable benefits and a very high degree of user acceptance not previously experienced in earlier TM automation efforts. The results of these tests were used as the basis for what eventually became the DoD IETM specifications.

Who carried out the NTIPS Program?

NTIPS was a Navy managed RDT&E Program with an in-house team at the Carderock Division of the Naval Surface Warfare Center (formally known as the David Taylor Research Center). Samuel C. Rainey and later Joseph J. Fuller served as the Navy NTIPS Program Manager. Eric L. Jorgensen was the NTIPS Manager for Technology during most of the Program. The program was originated by Robert A. Sulit, now retired. Hughes Aircraft Company, Program Manager - John G. Bean, was the principal Contractor.

What is the NTIPS Government team now doing to help the Navy?

While the work funded by the NTIPS Program has now been concluded, the Carderock Division, NSWC still continues its leadership role in the Navy's application of IETMs and other issues related to the introduction of IETM technology into the Fleet. The Carderock team is actively advising many weapon-systems programs and policy officials in the implementation of IETMs. Programs planning for the use of IETMs include the AEGIS ships, AN/BSY-2 battle system for submarines, FDS underwater surveillance system, and the A-X and V-22 aircraft.